



Dart Hawkesbury  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**D2519**  
**Job Sheet 167311-A**



Part No: D2519

Job Qty: 20 ea

Part Name: Clamp



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 10/27/17

Job Tracking No:

Due Date: 11/3/17

Created By: Linda Lacelle

Type: Stock

Description:

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off      |
|-------|--------------------|--------|------------|----------|-----------|---------|-----------------------|-----------|---------------|
|       |                    |        |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |               |
| 90    | Start up Operation | 20 Ea  |            | 11/2/17  | 0.00      | 0.00    | Start Up Waterjet1    |           |               |
| 100   | Waterjet           | 20 pcs |            | 11/2/17  | 0.00      | 0.68    | Waterjet1             |           | DAS           |
| 120   | QC                 | 20 pcs |            | 11/2/17  | 0.00      | 0.00    | QC8                   |           | 38            |
| 130   | Brake NC           | 20 pcs |            | 11/3/17  | 0.02      | 0.98    | Brake NC 1            |           | 9-89 DAS      |
| 140   | QC                 | 20 pcs |            | 11/3/17  | 0.00      | 0.00    | QC5                   |           | 38            |
| 150   | Packaging          | 20 pcs |            | 11/3/17  | 0.00      | 0.00    | Packaging3            |           | STB42 AT 9-89 |
| 160   | QC21-SA            | 20 Ea  |            | 11/3/17  | 0.00      | 0.00    | QC21                  |           |               |

Part Op 100 - 1-Cut as per Dwg  
Descriptions: 130 - 1- remove press and machine marking as necessary

DAS  
21  
9-89  
DEC 04 2017

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated | Std Qty |
|-----------------------|----------------|----------|-----------|-----------|---------|
| 90-Start up Operation | M304S16GA      | 1        | 164       | 0         | 0       |

138346

### Part Specifications

| Spec No | Description | Target/Tolerance                  | Limits         | Type | Special Comments |
|---------|-------------|-----------------------------------|----------------|------|------------------|
| 1       | Clamp       | 0.257inches<br>+ 0.006<br>- 0.001 | 0.263<br>0.256 |      |                  |
| 2       | Clamp       | 0.400inches ± 0.030               | 0.430<br>0.370 |      |                  |
| 3       | Clamp       | 0.750inches ± 0.010               | 0.760<br>0.740 |      |                  |
| 4       | Clamp       | 8.561inches ± 0.010               | 8.571<br>8.551 |      |                  |
| 5       | Clamp       | 0.063inches ± 0.010               | 0.073<br>0.053 |      |                  |

**DART**  
AEROSPACE

**S004608**



Clamp

**PART NO:**  
**Revision:**  
**Operation:**  
**Quantity:**  
**Change No:**

**D2519**

**Start up Operation**  
**20**

**Dart Aerospace Ltd.**  
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CANADA  
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**Mfg Date: 11/01/17**  
**Job No: 167311-A**





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# Inventory

| Operation Number                                           | Operation  | Serial Number  | Job             | Quantity | Weight   | Original Serial Number | Location           | Container | Status | Added     | Special Comments | Label                                                                               | Supplier | Change No |
|------------------------------------------------------------|------------|----------------|-----------------|----------|----------|------------------------|--------------------|-----------|--------|-----------|------------------|-------------------------------------------------------------------------------------|----------|-----------|
| <b>Part Number: M304S16GA Revision: 304/316 Sheet .063</b> |            |                |                 |          |          |                        |                    |           |        |           |                  |                                                                                     |          |           |
| 100                                                        | Receive sf | <b>S004606</b> | <b>167311-A</b> | 0 sf     | 0        | m138346                | Start Up Waterjet1 |           | Stock  | 11/1/2017 | Issue Container  |  |          |           |
| <b>Operation Totals:</b>                                   |            | <b>1</b>       |                 | <b>0</b> | <b>0</b> |                        |                    |           |        |           |                  |                                                                                     |          |           |
| <b>Part Totals:</b>                                        |            | <b>1</b>       |                 | <b>0</b> | <b>0</b> |                        |                    |           |        |           |                  |                                                                                     |          |           |
| <b>Totals:</b>                                             |            | <b>1</b>       |                 | <b>0</b> | <b>0</b> |                        |                    |           |        |           |                  |                                                                                     |          |           |

Plex 1/9/2018 8:35 AM Dart.Boucher.Sylvie



DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                                           |  |  |
|--------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |  | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |  | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>             Skid-tube <input type="checkbox"/><br/>             Machining <input type="checkbox"/><br/>             Thermoforming <input type="checkbox"/><br/>             Large Fab <input type="checkbox"/> </div> <div>             Cross tube <input type="checkbox"/><br/>             Small Fab <input type="checkbox"/><br/>             Finishing <input type="checkbox"/><br/>             Composite <input type="checkbox"/> </div> <div>             Water Jet <input type="checkbox"/><br/>             Prod. Eng. Coord. <input type="checkbox"/><br/>             Rec/Store/Packaging <input type="checkbox"/><br/>             Supplier <input type="checkbox"/> </div> <div>             Engineering <input type="checkbox"/><br/>             Quality <input type="checkbox"/><br/>             Other <input type="checkbox"/> </div> </div> |  |  |                                                                                                                                                                           |  |  |
| Date :                                                       |  | Step #:                                                                                                                                                                            |  | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | <b>MRB (QSI042) Approval</b><br><br><br><b>Completed By</b><br><br><br><b>Lead hand / Supervisor Approval Verification</b><br><br><br><b>QC / QA Coordinator Approval</b> |  |  |
| <b>Description Work Order Deviation</b>                      |  |                                                                                                                                                                                    |  | <b>Disposition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                                                                                                                                                           |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                                           |  |  |
|                                                              |  |                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                                           |  |  |

| Root Cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     |                                             |                                           | FAULT CATEGORY                                  |                                                            |                                                |                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------|-------------------------------------------|-------------------------------------------------|------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|
| Environment <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Design <input type="checkbox"/>     | Doc/Data <input type="checkbox"/>           | Equip/Tooling <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>        | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>      | Positioned Wrong <input type="checkbox"/>     |
| Handling/Pre <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Material <input type="checkbox"/>   | Internal Transport <input type="checkbox"/> | Tribal Knowledge <input type="checkbox"/> | Bending <input type="checkbox"/>                | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>         | Outside Dimensions <input type="checkbox"/>   |
| LOA <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Substation <input type="checkbox"/> | Past Expiry Date <input type="checkbox"/>   | Misidentified <input type="checkbox"/>    | Centre Not Concentric <input type="checkbox"/>  | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                 | Over/Under tolerance <input type="checkbox"/> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                             |                                           | Cracks <input type="checkbox"/>                 | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                  | Part Incorrect <input type="checkbox"/>       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                             |                                           | Crimp/Kink/Ripple/Wave <input type="checkbox"/> | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>    | Part Lost/Missing <input type="checkbox"/>    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                             |                                           | Cuffs <input type="checkbox"/>                  | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>       | Part Moved <input type="checkbox"/>           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                             |                                           | Crushing <input type="checkbox"/>               | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>               | Drawing <input type="checkbox"/>              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                             |                                           | Heat Treat <input type="checkbox"/>             | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>            | Finish <input type="checkbox"/>               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                             |                                           | Wave/Twist in Tube <input type="checkbox"/>     | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>          | Misread <input type="checkbox"/>              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                             |                                           | Marks/Chatter <input type="checkbox"/>          | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/> | Turning Sequence <input type="checkbox"/>     |
| No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Past Due <input type="checkbox"/> |                                     |                                             |                                           | OTHER : _____                                   |                                                            |                                                |                                               |